



United States Department of the Interior

MINERALS MANAGEMENT SERVICE

Royalty Management Program
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Denver, Colorado 80225-0165

IN REPLY REFER TO:

MMS-RVD
Mail Stop 3150

JUN 2 1997

Memorandum

To: Chief, Accounting and Reports Division
From: Chief, Royalty Valuation Division *Deborah Tibb Kelley*
Subject: Royalty-In-Kind Billings--Valuation Changes

Due to significant concerns that MMS has not been receiving market value for oil production taken under its Royalty-in-Kind (RIK) program, we met with you several times recently regarding potential RIK underpayments. As you know, we have reviewed RIK payments received on production in certain areas of Colorado and the Gulf of Mexico. We summarize our findings below, including recommended billings for the March 1997 production month.

The first location we chose for review was the Rangely Weber Sand Unit in Colorado. We chose that area because of the significant RIK volumes there and an ongoing audit by the State of Colorado, which afforded us access to oil sales contracts and related information. The other location chosen was the Gulf of Mexico Outer Continental Shelf (OCS)--specifically, a subset of leases based on their designated onshore delivery point at Empire, Louisiana. We chose this location primarily because significant RIK production occurs in the Gulf of Mexico. For both locations, we made several assumptions as detailed below in order to reach our conclusions.

Rangely

The Rangely Weber Sand Unit was a logical choice because the State of Colorado's audit work has already yielded several arm's-length contracts covering past Rangely oil production. There are four companies with arm's-length contracts; we have all but one of the applicable contracts for periods subject to our initial review (various months in 1996). The payors selling at arm's-length include Hunt, Marathon, Equity Oil, and Texaco Trading and Transportation (after initially receiving the production from its affiliate, Texaco Exploration and Production).

Our initial review indicated that Texaco, Hunt, Marathon, and Equity reported values on Report of Sales and Royalty Remittance (Form MMS-2014) at or very close to their contract terms. However, we have only one of Texaco's two arm's-length contracts. That one contract covers approximately 18 percent of the volumes being reported by Texaco on Form MMS-2014. We are still trying to acquire Texaco's other arm's-length contract for the additional volumes, and updates on the others' to verify reported values for current periods.

The non-arm's-length payors, Chevron and Amoco, have reported values significantly lower than the arm's-length payors' contract prices. Production is taken in kind from 17 Rangely leases (of 29 total leases in the Weber Sand Unit). For these 17 leases, arm's-length contracts cover about 10 percent of the production. All of the oil RIK production in the Rangely Weber Sand Unit is taken by Wyoming Refining Company under Contract No. 6300-87306. Therefore, this revised billing procedure will not affect any other oil RIK contracts.

Although we don't have all the current arm's-length contracts in hand, we believe the RIK refiner/purchaser should be billed on the arithmetic average of the arm's-length payors' reported prices on Form MMS-2014 because the earlier-period review showed the arm's-length payors reported at or near their contract prices. That is, for production reported by the non-arm's-length sellers (Chevron and Amoco) Wyoming Refining should be billed based on the arithmetic average of the prices reported by the arm's-length producers. However, prices reported for production reported by arm's-length reporters should not be adjusted.

The regulations at 30 CFR § 206.102 (1996), state that the value may not be less than the gross proceeds accruing to the lessee, including the additional consideration. Therefore, the unit price to be billed will be the higher of the unit price reported on Form MMS-2014 or the revised unit price provided by RVD.

We believe this approach is supportable under the third existing non-arm's-length valuation benchmark (30 CFR § 206.102 (c) (1996)), arithmetic average of others' contemporaneous arm's-length contract prices for significant quantities of like-quality oil in the same field. The first benchmark is prices paid or received by the lessee in arm's-length purchases or sales of significant quantities of like-quality oil; however, the non-arm's-length payors at Rangely don't have any such arrangements. The second benchmark is the average of others' contemporaneous posted prices used in arm's-length contracts. But the existing arm's-length contract prices use postings plus premiums, so this benchmark doesn't apply either. Thus the third benchmark is the first one applicable. We will continue our efforts to acquire current contracts from Hunt, Marathon, Equity, and Texaco to verify that reported prices agree with contract prices.

Further, during discussions with the State of Colorado, we learned that Marathon is reporting a value net of an \$ x -4 /bbl transportation factor. In calculating the arithmetic average of the arm's-length prices reported on Form MMS-2014, we have added back the \$ x -4 /bbl transportation factor. In addition, we recommend adjusting the bill to reflect an additional \$ x -4 /bbl. for those lines reported by Marathon (Table 3).

In calculating the arithmetic average of the arm's-length reported prices, Hunt, Marathon, and Equity appear to be adjusting their contract prices for gravity as produced. Texaco, on the other hand, appears to be reporting its value based on 40 degrees API gravity although reporting its actual, lower lease gravity. We believe this is due to the fact that the contract pricing terms specify a posted price deemed at 40 degrees API gravity, which may be interpreted differently by the companies. We therefore have calculated the arithmetic average by adjusting the calculated unit price from Form MMS-2014 to 40 degrees API gravity for Hunt, Marathon, and Equity but not adjusting the calculated unit price from Form MMS-2014 for Texaco.

In addition, there are three other companies reporting data on Form MMS-2014 related to leases contained in the Rangely Weber Sand Unit. They are Citation, Eott Energy,, and Twin Arrow. Per the State of Colorado, the data reported by these companies should not be included when calculating the arithmetic average of the arm's-length prices since they do not meet the criteria for significant quantities or like quality. This is because the leases being reported (1) are producing from a formation not associated with the Weber formation, (2) do not have sales every month, and (3) do not produce sufficient volumes to be included in a calculation based on significant quantities.

Tables 1 and 2 summarize the amounts we believe should be billed to Wyoming Refining Company for March 1997 production. Gravity adjustments to the average arm's-length price in Table 1 should be made according to the schedule in Table 2.

Gulf OCS

We chose the Gulf as our second RJK reference point largely because of the volume of oil taken in kind there. But since we didn't have contracts or knowledge of which payors dispose of their production at arm's length, we took a different approach. The regulations at 30 CFR § 208.4 (1996) state: "All sales of royalty oil from OCS leases will be priced at the fair market value of the oil including associated transportation costs to the designated delivery point, if applicable." We believe the spot price to be a fair representation of market value and therefore recommend billing using the monthly average of Platt's Spot Price Assessment for Heavy Louisiana Sweet delivered at Empire, Louisiana in effect for the applicable production month. The Platt's value, which has an associated API gravity of 32 degrees, is compared to the payor value reported at a specific gravity after both are adjusted to 40 degrees API. The gravity adjustments were based on the Gravity Adjustment Reference Table C on Shell Oil Products Company crude oil price bulletin effective March 1997. We recommend billing the refiners based on the difference between the reported price on Form MMS-2014 adjusted to 40 degrees and the spot price at Empire adjusted to 40 degrees multiplied by the royalty volumes reported on Form MMS-2014.

The regulations at 30 CFR § 206.102 state that the value may not be less than the gross proceeds accruing to the lessee, including the additional consideration. Therefore, the unit price to be billed will be the higher of the unit price calculated from Form MMS-2014 or the revised unit price provided by RVD.

There are three crude oil spot prices applicable to the Gulf:

- Heavy Louisiana Sweet delivered to Empire, Louisiana (32 degrees API, 0.3 percent sulfur)
- Light Louisiana Sweet delivered to St. James, Louisiana (37-38 degrees API, 0.3 percent sulfur)
- Eugene Island delivered to St. James, Louisiana (35 degrees API, 0.84 percent sulfur)

We identified OCS Gulf leases with RIK delivery points at St. James and Empire. However, for those leases with St. James delivery, we have not yet been able to identify with confidence the proper spot price to apply--largely because the sulfur content is not evident from the Form MMS-2014. So we selected that subset of RIK leases (30) whose delivery point was Empire. Affected refiners include Age Refining Inc., Placid Refining Company, Gold Line Refining Ltd, Calcasieu Refining Company, Gary Williams Energy Corp., and Giant Industries Arizona, Inc.

Tables 4 and 5 summarize the values that we recommend be billed to the affected refiners for March 1997 production. Gravity adjustments to the spot price in Table 4 should be made according to the schedule in Table 5.

For Rangely Weber Sand Unit leases and the subject Gulf of Mexico oil RIK leases, Table 6 lists the Accounting Identification Numbers/product codes/selling arrangements for which the March 1997 RIK billings would apply.

We trust the information we have provided will enable you to perform the March 1997 billing. We will provide similar information for April. If you have any questions, contact Dave Hubbard at 275-7260.

Attachments

bcc: RM File

RM Chron DC/LKWD (2)

RVD Chron (2)

EVB

LMS:MMS/RMP/RVD/EVB:MS 3151:DDomagala:skd:275-7255:p:\users\dean\wp\debbie\vikinr3.wpd

DRAFT:06/02/97

FINAL:06/02/97

Table 1

Rangely Weber Sand Unit--Revised Bill Amounts March 1997 Production Month													REVISED UNIT PRICE	REVISED BILL AMOUNT
BILL	YR	CONTRACT LINE	PAYOR PAY_NAME	_MO	AID	TC	QUAL	PRICE	QUANTITY	AMOUNT				
05970018	97	87306 000204	1086) AMOCO PROD	03/97	065-033586-0-001/01/060	SH	33.9	X	1195.57					
05970018	97	87306 000205	1086) AMOCO PROD	03/97	065-051529-0-001/01/060	SH	33.9	X	102.40	X				
05970018	97	87306 000206	1086) AMOCO PROD	03/97	065-051529-0-004/01/060	SH	33.9		102.44					
05970018	97	87306 000207	1086) AMOCO PROD	03/97	065-051900-0-001/01/060	SH	33.9		1047.28					
05970018	97	87306 000208	1086) AMOCO PROD	03/97	065-052265-A-001/01/060	SH	33.9		829.57					
05970018	97	87306 000209	1086) AMOCO PROD	03/97	065-052538-0-001/01/060	SH	33.9		664.25					
05970018	97	87306 000210	1086) AMOCO PROD	03/97	065-053334-0-001/01/060	SH	33.9		521.34					
05970018	97	87306 000211	1086) AMOCO PROD	03/97	065-053980-0-001/01/060	SH	33.9		1083.96					
05970018	97	87306 000212	16752 CHEVRON USA	03/97	065-032675-0-001/01/060	SH	27.5		14078.68					
05970018	97	87306 000213	16752 CHEVRON USA	03/97	065-032683-A-001/01/060	SH	33.0		570.22					
05970018	97	87306 000214	16752 CHEVRON USA	03/97	065-032683-B-001/01/060	SH	26.8		520.52					
05970018	97	87306 000215	16752 CHEVRON USA	03/97	065-032703-A-001/01/060	SH	33.0		2721.59					
05970018	97	87306 000216	16752 CHEVRON USA	03/97	065-032703-B-001/01/060	SH	25.9		4236.20					
05970018	97	87306 000217	16752 CHEVRON USA	03/97	065-033586-0-001/01/060	SH	24.3		1076.00					
05970018	97	87306 000218	16752 CHEVRON USA	03/97	065-033720-0-001/01/060	SH	33.0		937.66					
05970018	97	87306 000219	16752 CHEVRON USA	03/97	065-051174-0-001/01/060	SH	25.8		890.55					
05970018	97	87306 000220	16752 CHEVRON USA	03/97	065-051529-0-001/01/060	SH	33.0		56.95					
05970018	97	87306 000221	16752 CHEVRON USA	03/97	065-051529-0-004/01/060	SH	33.0		115.20					
05970018	97	87306 000222	16752 CHEVRON USA	03/97	065-052241-0-002/01/060	SH	33.0		793.81					
05970018	97	87306 000223	16752 CHEVRON USA	03/97	065-052265-A-001/01/060	SH	33.0		746.57					
05970018	97	87306 000224	16752 CHEVRON USA	03/97	065-052538-0-001/01/060	SH	24.3		540.64					
05970018	97	87306 000225	16752 CHEVRON USA	03/97	065-052561-0-002/01/060	SH	33.0		1767.70					
Total									34909.10	\$709,020.42				\$645,887.97

Table 2
Rangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Arm's-Length Price for Gravity
22.0	
22.1	X
22.2	
22.3	
22.4	
22.5	
22.5	
22.7	
22.8	
22.9	
23.0	
23.1	
23.2	
23.3	
23.4	
23.5	
23.5	
23.7	
23.8	
23.9	
24.0	
24.1	
24.2	
24.3	
24.4	
24.5	
24.6	
24.7	
24.8	
24.9	
25.0	
25.1	
25.2	
25.3	
25.4	

Table 2
Rangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Arm's Length	Price for Gravity
25.5		
25.6	X	
25.7		
25.8		
25.9		
26.0		
26.1		
26.2		
26.3		
26.4		
26.5		
26.6		
26.7		
26.8		
26.9		
27.0		
27.1		
27.2		
27.3		
27.4		
27.5		
27.6		
27.7		
27.8		
27.9		
28.0		
28.1		
28.2		
28.3		
28.4		
28.5		
28.6		
28.7		
28.8		
28.9		

Table 2
Rangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Gravity (° API)	Price for Gravity
29.0		
29.1	X	
29.2		
29.3		
29.4		
29.5		
29.6		
29.7		
29.8		
29.9		
30.0		
30.1		
30.2		
30.3		
30.4		
30.5		
30.6		
30.7		
30.8		
30.9		
31.0		
31.1		
31.2		
31.3		
31.4		
31.5		
31.6		
31.7		
31.8		
31.9		
32.0		
32.1		
32.2		
32.3		
32.4		

Table 2
Rangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Arm's-Length	Price for Gravity
32.5	X	
32.6		
32.7		
32.8		
32.9		
33.0		
33.1		
33.2		
33.3		
33.4		
33.5		
33.6		
33.7		
33.8		
33.9		
34.0		
34.1		
34.2		
34.3		
34.4		
34.5		
34.6		
34.7		
34.8		
34.9		
35.0		
35.1		
35.2		
35.3		
35.4		
35.5		
35.6		
35.7		
35.8		
35.9		

Table 2
Flangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Arm's-Length Price for Gravity
36.0	X
36.1	
36.2	
36.3	
36.4	
36.5	
36.6	
36.7	
36.8	
36.9	
37.0	
37.1	
37.2	
37.3	
37.4	
37.5	
37.6	
37.7	
37.8	
37.9	
38.0	
38.1	
38.2	
38.3	
38.4	
38.5	
38.6	
38.7	
38.8	
38.9	
39.0	
39.1	
39.2	
39.3	
39.4	

Table 2
Rangely Gravity Adjustment Schedule

Reported Gravity (° API)	Adjusted Arm's-Length Price for Gravity
39.5	X
39.6	
39.7	1
39.8	
39.9	
40.0	4

Table 3
 Rangeley Water Servl Unit-Revised Billing for Marathon
 (March 1987 Production Month)

BILL	YR	CONTRACT	LINE	PAYOR	PAY_NAME	MO	AID	TC	QUAL	SALES		REVISED PRICE	QUANTITY	AMOUNT	REVISED AMOUNT
05970018	97	87306 000238	37312 MARATHON OIL	03/87	1065-033588-0-101/01/80	SH	34.0	X	X			1186.57	X	X	
05970018	97	87306 000239	37312 MARATHON OIL	03/87	1065-051529-0-101/01/80	SH	34.0					86.84			
05970018	97	87306 000240	37312 MARATHON OIL	03/87	1065-051529-0-104/01/80	SH	34.0					132.71			
05970018	97	87306 000241	37312 MARATHON OIL	03/87	1065-062285-A-101/01/80	SH	34.0			4	4	829.53			
05970018	97	87306 000242	37312 MARATHON OIL	03/87	1065-051538-0-101/01/80	SH	34.0					634.56	4	4	

Table 4
 On RIK Leases With Delivery Point at Empire
 Revised Billing Data
 03/97 Production Month

BILL	YR	CONTRACT	LINE	PAYOR	PAY_NAME	MD	AD	T-1	QUAL	PRICE	QUANTITY	AMOUNT	HLS Spot		REVISED		REVISED				
													397	Spcl to 40	Price to -40	Difference	UNIT	PRICE	AMOUNT	DUDE	
05970001	97	94101	000202	49480	SHELL WEST	03/97	04-004481-0-001/01/060	SH	36.2	X	722.11		\$20.50	\$21.05							
05970001	97	94101	000139	16752	CHEVRON USA	03/97	04-004481-0-001/02/060	SH	36.0	X	185.36		\$20.50	\$21.05	X	X	X				
05970002	97	94104	000490	33415	KERR-MCGEE	03/97	04-004832-0-001/02/060	SH	45.8		897.11		\$20.50	\$21.05							
05970002	97	94104	000565	48795	SAMEDAN OIL	03/97	04-004832-0-001/02/060	SH	45.8		299.04		\$20.50	\$21.05							
05970009	97	94107	000212	16370	CASE-POMEROY	03/97	04-004903-0-001/01/060	SH	35.7		958.01		\$20.50	\$21.05							
05970009	97	94107	000239	17355	AVARA ENERG	03/97	04-004903-0-001/01/060	SH	35.7		3619.36		\$20.50	\$21.05							
05970009	97	94107	000337	71650	E.F EXPL INC	03/97	04-004903-0-001/01/060	SH	35.7		3406.43		\$20.50	\$21.05							
05970009	97	94107	000280	41247	TAYLOR ENERG	03/97	04-004935-0-001/01/060	SH	30.3		5528.21		\$20.50	\$21.05							
05970002	97	94104	000477	17555	CONOCO INC	03/97	04-005051-0-001/01/060	SH	45.4		498.35		\$20.50	\$21.05							
05970002	97	94104	000566	44730	PHILLIPS PET	03/97	04-005051-0-001/01/060	SH	45.5		243.33		\$20.50	\$21.05							
05970006	97	94102	000265	11110	APACHE CORP	03/97	04-005659-0-001/02/061	SH	40.7		7592.95		\$20.50	\$21.05							
05970001	97	94107	000245	17555	CONOCO INC	03/97	04-005825-0-001/01/060	SH	26.5		3156.32		\$20.50	\$21.05							
05970011	97	94112	000237	17555	CONOCO INC	03/97	04-005825-0-001/01/063	SH	26.5		2682.87		\$20.50	\$21.05							
05970001	97	94102	000267	17555	CONOCO INC	03/97	04-005825-0-001/01/065	SH	26.5		6628.29		\$20.50	\$21.05							
05970008	97	94108	000105	13862	BOIS D'ARC	03/97	04-006736-0-001/01/060	SH	35.7		601.47		\$20.50	\$21.05							
05970006	97	94102	000277	16752	CHEVRON USA	03/97	04-009690-0-001/01/061	SH	35.0		1005.20		\$20.50	\$21.05							
												162,750.86		\$3,134,744.55						\$3,334,424.26	

Table 4
Oil R&I Leases With Delivery Point at Empire
Revised Billing Data
(1997 Production Month)

Table 5

Empire Gravity Adjustment Schedule
Taken From Shell's 03/97 Offshore Posting

<u><35 Deg</u>	<u>35-35.9</u>	<u>36-36.9</u>	<u>37-37.9</u>	<u>38-38.9</u>	<u>39-39.9</u>	<u>40-45.0</u>	<u>>45 Deg</u>
0.15	0.1	0.08	0.06	0.04	0.02	0	0.15

Table 6

Listing of AID's/Product Codes/Selling Arrangements for Rangely Weber Sand Unit and Empire

Rangely Weber Sand Unit	Empire
064-044259-A-001/01/060	054-001898-0-001/01/060
064-044259-B-001/01/060	054-001898-0-001/01/061
065-033586-0-001/01/060	054-001898-0-001/02/060
065-051529-0-001/01/060	054-002177-0-002/01/060
065-051529-0-004/01/060	054-002177-0-002/01/060
065-051900-0-001/01/060	054-002177-0-002/01/060
065-052265-A-001/01/060	054-002177-0-002/02/060
065-052538-0-001/01/060	054-002177-0-003/01/060
065-053334-0-001/01/060	054-002177-0-003/01/060
065-053980-0-001/01/060	054-002177-0-003/01/062
065-032675-0-001/01/060	054-002193-0-001/01/001
065-032683-A-001/01/060	054-002193-0-001/01/060
065-032683-B-001/01/060	054-002193-0-001/02/001
065-032703-A-001/01/060	054-002193-0-001/02/060
065-032703-B-001/01/060	054-002213-0-001/01/060
065-033586-0-001/01/060	054-002213-0-001/01/060
065-033720-0-001/01/060	054-002213-0-001/01/060
065-051174-0-001/01/060	054-002213-0-001/01/061
065-051529-0-001/01/060	054-002213-0-001/02/060
065-051529-0-004/01/060	054-002445-0-001/01/060
065-052241-0-002/01/060	054-002445-0-001/01/061
065-052265-A-001/01/060	054-002445-0-001/01/061
065-052538-0-001/01/060	054-002445-0-001/01/062
065-052561-0-002/01/060	054-002445-0-001/02/061
	054-002941-0-003/01/060
	054-002941-0-003/02/060
	054-002941-0-004/01/060
	054-002947-0-001/01/060
	054-002947-0-001/02/060
	054-002950-0-001/01/060
	054-002951-0-001/01/060
	054-003147-0-001/02/060
	054-003147-0-002/01/060
	054-003194-0-001/01/060
	054-003195-0-002/01/060
	054-003195-0-002/02/060
	054-003339-0-002/01/060
	054-003339-0-002/01/061
	054-003339-0-002/01/062
	054-003339-0-002/02/060
	054-003339-0-004/01/060
	054-003417-0-001/01/060
	054-003417-0-001/02/060
	054-003577-0-001/01/060
	054-003577-0-001/02/060
	054-004127-0-001/01/060
	054-004127-0-001/02/060
	054-004253-0-001/01/060
	054-004253-0-001/01/061
	054-004253-0-001/01/062

Table 6
Listing of AID's/Product Codes/Selling Arrangements for Rangely Weber Sand Unit and Empire

Rangely Weber Sand Unit	Empire
	054-004253-0-001/02/060
	054-004253-0-002/01/060
	054-004253-0-003/01/060
	054-004473-0-001/01/060
	054-004473-0-001/01/061
	054-004473-0-001/01/062
	054-004481-0-001/01/060
	054-004481-0-001/01/061
	054-004481-0-001/02/060
	054-004832-0-001/02/060
	054-004903-0-001/01/060
	054-004909-0-001/01/060
	054-004909-0-001/01/061
	054-004909-0-002/01/060
	054-004935-0-001/01/060
	054-005051-0-001/01/060
	054-005659-0-001/01/061
	054-005659-0-001/02/061
	054-005660-0-001/01/060
	054-005660-0-001/02/060
	054-005825-0-001/01/060
	054-005825-0-001/01/062
	054-005825-0-001/01/063
	054-005825-0-001/01/065
	054-006736-0-001/01/060
	054-006736-0-001/02/060
	054-009690-0-001/01/061